

AMENDMENTS TO THE CLAIMS:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently amended) A method for the transmission of GPRS information ~~by means of GPRS in an IP network~~ from a mobile terminal,

a) wherein the GPRS information is transmitted into in particular a wireless LAN and/or a Hiperlan network, using a mobile terminal,

a1) [[-]] wherein the mobile terminal can exchange IP packets with an IP serving GPRS support node in the IP network,

a2) [[-]] wherein, during initialization of the connection, a tunnel is established between the mobile terminal and the IP serving GPRS support node, wherein the tunnel tunnels GPRS information on the basis of IP packets,

a3) [[-]] wherein the information is transmitted through the tunnel,

a4) [[-]] wherein the IP serving GPRS support node is connected via the IP network to further serving GPRS support nodes and, depending on the direction of communication, unpacks and/or repacks the information in order to send the information to the further serving GPRS support nodes, or packs the information in order to send it through the tunnel to the mobile terminal

b) wherein the GPRS information is transmitted from the mobile terminal into a radio network, such as a GSM network or a UMTS network,

c) wherein a handover is effected between the different network types, and

d) wherein the handover from one network type to another is optimized utilizing a mechanism the predicts the future trend of connection quality of the different network types.

2. (Previously presented) The method as claimed in claim 1, wherein software which unpacks the tunneled GPRS information is installed on the mobile terminal.

3. (Previously presented) The method as claimed in claim 1, wherein during initialization of the connection a check is made whether the mobile terminal is permitted access to a GPRS network, with known security checks based on the GPRS mode being performed.
4. (Previously presented) The method as claimed in claim 1, wherein broadcast messages are used to seek an IP serving GPRS support node in the IP network in order to establish a tunnel.
5. (Previously presented) The method as claimed in claim 1, wherein an HLR service is present which permits the terminal to be determined and/or located both on the basis of the IP address of the terminal and on the address information of GPRS.
6. (Previously presented) The method as claimed in claim 1, wherein a handover may be performed both on the IP level and on the GPRS level, depending on the network in which the terminal is located.
7. (Previously presented) The method as claimed in claim 1, wherein encryption is performed on the GPRS and/or IP level, preferably by means of IPSec.

8. (Currently amended) A device for providing GPRS ~~services in an IP network, in particular information from a mobile terminal to~~ a wireless LAN and/or a Hiperlan network, having means that enable a functionality of a serving GPRS support node (SGSN) in a GPRS and/or UMTS network, and further including means which enable communication with a mobile terminal via GPRS through an IP tunnel, wherein:

the GPRS information is transmitted from the mobile terminal into a radio network,
a handover is effected between the different network types, and
the handover from one network type to another is optimized utilizing a mechanism
the predicts the future trend of connection quality of the different network types.

9. (Previously presented) The device as claimed in claim 8, further including means which enable a gateway functionality, including the routing of information into other networks.

10. (Previously presented) The device as claimed in claim 8, further including means which enable the mapping of an IP address in an HLR.

11. (Previously presented) The device as claimed in claim 8, further including means with which a handover may be performed both on the IP level and on the GPRS level, depending on the network in which the mobile terminal is located.

12. (Previously presented) The device as claimed in claim 8, further including means which enable encryption on the GPRS and/or IP level, preferably by means of IPSec.

13. (Previously presented) The device as claimed in claim 8, further including means which can receive broadcast messages of a mobile terminal in order to establish a GPRS tunnel connection thereby.
14. (Previously presented) A mobile terminal having means for communication in an IP network, in particular a wireless LAN and/or a Hiperlan network, and means that enable information to be exchanged via GPRS through an IP tunnel.
15. (Previously presented) The mobile terminal as claimed in claim 14, wherein the terminal supports both wireless LAN and UMTS and/or GSM.
16. (Previously presented) The mobile terminal as claimed in claim 14, further including means which enable address conversion, in particular from IPv4 to IPv6 and vice versa, as well as NAT and/or masquerading.
17. (Previously presented) The mobile terminal as claimed in claim 14, further including means which enable encryption of the tunneled information, or encrypt the tunnel packets themselves, with IPSec preferably being used.
18. (Previously presented) The mobile terminal as claimed in claim 14, further including means which enable authentication in the GPRS network.
19. (Previously presented) The mobile terminal as claimed in claim 14, further including a software layer that enables the functionality described, said layer preferably having access to an IP stack.

20. (Currently amended) Software instructions stored on a computer-readable medium for a terminal in an IP network, in particular a mobile terminal such as a PDA or a mobile phone that, when executed by a processor in the terminal, implements a process which enables information to be exchanged via GPRS through an IP tunnel, wherein:

the information is transmitted from the mobile terminal into a radio network, such as a GSM network or a UMTS network,

a handover is effected between the different network types, and

the handover from one network type to another is optimized utilizing a mechanism the predicts the future trend of connection quality of the different network types.

21. (Previously presented) A computer-readable data carrier having a data structure that can be loaded into a terminal, wherein the data structure includes the software instructions according to claim 20.

22. (Previously presented) The method as claimed in claim 1, wherein the mobile terminal is chosen such that it supports both wireless LAN and UMTS and/or GSM.

23. (Cancelled).